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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/501,968	07/20/2004	Roger Harquail French	CL2037USPCT	8426
7590 12/12/2005 E I Du Pont de Nemours and Company Legal Patent Wilmington, DE 19898			EXAMINER CHACKO DAVIS, DABORAH	
			ART UNIT	PAPER NUMBER

1756

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/501,968

Applicant(s)

FRENCH ET AL

Examiner

Daborah Chacko-Davis

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 20 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-18, and 21-24, are rejected under 35 U.S.C. 102(e) as being anticipated by U. S. Patent No. 6,824,930 (Wheland et al., herein after referred to as Wheland).

Wheland, in the abstract, in col 2, lines 63-67, in col 3, lines 1-22, and lines 54-59, in col 6, lines 60-67, in col 25, lines 29-49, discloses an organic composition (optical element) that has an absorbance/micrometer of  $< 1$  in a wavelength range of 140 to 186 nm, and is subjected to extracting means, wherein an optical element is disposed between the source and the receptor, and disposing in the path of the emitted radiation (140nm to 186nm em radiation) a receptor (substrate on which an optical image is formed) responsive to the pattern of electromagnetic radiation so as to form a pattern on the receptor, said optical element (optically transparent composition) includes an amorphous polymer comprising a copolymer of linear hydrofluorocarbons (includes photochemically active species) having at least 2 carbon atoms, no adjacent C-H bonds longer than two (CH-CH) (i.e.,  $(CH_2)_n$ , where  $n=1$ ), no  $CH_2-CH_3$  radicals (i.e., only

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monomeric units of  $CX_2=CH_2$ ), no C-F bonds longer than 6 ( i.e.,  $(CF_2)_n$ , where  $n=6$ ) (claims 1, 5, and 15). Wheland, in col 24, lines 1-3, discloses that the organic composition includes a liquid (includes moisture) such as  $CF_3CFHCFHCF_2CF_3$  (claims 2-4, 9-11, and 16-18). Wheland, in col 15, lines 55-67, in col 16, lines 1-19, discloses the claimed organic composition with photochemically active species (has absorbance in UV) including oxygen and moisture (solvent) (claims 6-8, and 21). Wheland, in col 16, lines 13-15, in col 18, lines 48-54, in col 21, lines 44-51, and in col 25, lines 35-42, discloses that after polymerizing the solution was purged with inert gas (nitrogen) and filtered through a microfiber syringe (molecular sieves) (claims 12-14, and 22-24).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 19-20, are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 6,824,930 (Wheland et al., herein after referred to as Wheland) in view of "Immersion Lithography at 157nm", Journal of Vacuum Science and Technology, B 19(6), 2353-2356 (2001) (Switkes et al., herein after referred to as Switkes).

Wheland is discussed in paragraph no. 2.

The difference between the claims and Wheland is that Wheland does not

disclose that at least one of said radiation source and said target are immersed in the optically transparent composition (claim 19). Wheland does not disclose that the both the radiation source and the target are immersed in the optically transparent composition (claim 20).

Switkes, in the introduction, and in the paragraph II (Index matching medium), and on page 2355, figure 5, discloses that the optical source and the medium (target) are immersed in an optically transparent composition (absorption of less than 1nm at 157nm).

Therefore, it would be obvious to a skilled artisan to modify Wheland by employing the method of immersing the source and the target in an optically transparent medium (liquid) as taught by Switkes because Wheland discloses that the composition is optically transparent and because Switkes, in the abstract, on page 2353, discloses that using immersion lithography (light source and substrate immersed in an index matching fluid at 157nm lithography system) enables an enhancement of resolution of 40% without radical changes in lasers, optics or resist technology, and enables patterning dense resist features of about 30nm.

### ***Double Patenting***

5. A rejection based on double patenting of the "same invention" type finds its support in the language of 35 U.S.C. 101 which states that "whoever invents or discovers any new and useful process ... may obtain a patent therefor ..." (Emphasis added). Thus, the term "same invention," in this context, means an invention drawn to identical subject matter. See *Miller v. Eagle Mfg. Co.*, 151 U.S. 186 (1894); *In re Ockert*, 245 F.2d 467, 114 USPQ 330 (CCPA 1957); and *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970).

A statutory type (35 U.S.C. 101) double patenting rejection can be overcome by canceling or amending the conflicting claims so they are no longer coextensive in

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scope. The filing of a terminal disclaimer cannot overcome a double patenting rejection based upon 35 U.S.C. 101.


6. Claims 1-24, are provisionally rejected under 35 U.S.C. 101 as claiming the same invention as that of claims 1-37 of copending Application No. 10/382,695. This is a provisional double patenting rejection since the conflicting claims have not in fact been patented.

### ***Conclusion***

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daborah Chacko-Davis whose telephone number is (571) 272-1380. The examiner can normally be reached on M-F 9:30 - 6:00. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark F Huff can be reached on (571) 272-1385. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

dcd

December 1, 2005.

  
MARK F. HUFF  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 1700